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P1: Policy Approaches to Address Threats to Human Health

A. Which threats are addressed by existing regulations or management programs?
B. Which threats are not being addressed and why?
C. What types of plans or programs are being used in other locations to address human health threats from water, sediments and biota and what is their documented effectiveness?

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Current Programs/Regulations: Which Threats Are Being Addressed?

- The existing regulations and management programs are targeted at specific projects/actions, chemicals, practices and/or geographic areas, and do not encompass all potential sources of similar threat or all potential threats.
- Many of these regulations and programs address the threat once it is present, or at the discharge point into Puget Sound, rather than in a pre-emptive, preventive manner

Table P1-1. Threats Addressed by Regulations and Programs

Regulation/Management Program	Chemical Toxic Threat	Biotoxin Threat	Pathogen Threat
Regulations to protect water and air quality from ongoing discharges (Clean Water Act and Clean Air Act requirements), as well as additional state, tribal, and local requirements.	X		X
Regulations to require cleanup of known contamination such as CERCLA, MTCA, and the sediment management standards.	X		
Federal and state regulations requiring spill response and cleanup, and controlling discharge of waste from certain types of aquatic vessels.	X		X
Ecology's Persistent Bioaccumulative Toxics Regulation, which was put in place to establish a list of PBTs and to outline procedures for developing chemical action plans for each identified PBT. A chemical action plan identifies, characterizes, and evaluates uses and releases of a specific PBT, a group of PBTs, or metals of concern, and recommends actions to protect human health and the environment.	X		
State, tribal, and local laws requiring implementation of specific land development and land use (including agricultural) practices, resource management programs (e.g., shellfish protection districts and programs), on-site sewage systems, and water reclamation and reuse requirements.	X		X
The National Shellfish Sanitation Program[i], administered by the U.S. Food and Drug Administration and implemented by the DOH, is a policy that protects threats to human health through regulation of shellfish-growing areas, license of harvesters, and sale for consumption.	X	X	X

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Regulation/Management Program	Chemical Toxic Threat	Biotoxin Threat	Pathogen Threat
State Department of Health programs monitor water quality for biotoxins (paralytic shellfish poison or “red tide” and amnesic shellfish poison or domoic acid) and pathogens (fecal coliform bacteria). DOH initiates fish and shellfish advisories and beach closures as needed to protect public health from existing health threats associated with contaminated seafood. These programs provide information to the public on where and how to safely harvest shellfish that are free from contamination by classifying beaches to identify safe areas for harvesting.		X	X
The BEACH (Beach Environmental Assessment Communication and Health) Program, which is jointly administered by the Departments of Health and Ecology, tests water at swimming beaches for pathogens, notifies the public when results are high, and educates people about what they can do to avoid getting sick from playing in s altwater.			X
The State Department of Health shellfish growing area classification program evaluates all commercially harvested shellfish growing areas in Washington State to determine their suitability for harvest. Growing areas classification is determined through completion of a sanitary survey, which involves a shoreline survey to identify pollution sources, water sampling to determine pathogen levels, and analysis of weather conditions, tides and currents to evaluate potential distribution of contaminants.			X

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Regulation/Management Program	Chemical Toxic Threat	Biotoxin Threat	Pathogen Threat
State Department of Health programs promote the safe treatment and disposal of domestic and non-industrial wastewater in areas of Washington not served by municipal sewage treatment works.	X		X
State Parks boater education programs reduce discharge of untreated sewage and trash into Puget Sound.			X
Washington State Department of Transportation stormwater program provides guidance and technical support for planning, design, construction and maintenance of roads to its regional offices.	X		X
The Stormwater Management Manual for the Puget Sound Basin outlines recommendations established by Ecology for temporary stormwater controls for use on construction sites, and permanent stormwater controls for long-term protection of water quality. The manual also defines stormwater Best Management Practices (BMPs) which are designed to prevent pollutants from entering stormwater by eliminating the source of pollution or by preventing the contact of pollutants with rainfall and runoff.	X		X
Local health jurisdiction regulatory, public education, and management plan activities address on-site sewage systems.	X		X
State Department of Health provides assistance to local health jurisdictions regarding on-site wastewater issues and the design and implementation of on-site sewage management plans.			X

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Regulation/Management Program	Chemical Toxic Threat	Biotoxin Threat	Pathogen Threat
State Department of Health and local health programs guide the siting, design, installation, operation, maintenance, and permitting of on-site sewage systems at all scales, and help design and implement education and training courses on these and other sewage-related subjects.			X
Combined Sewer Overflow Public Notification Programs, established by many municipalities around Puget Sound, notify the public not to swim or fish near outfalls after heavy rains have resulted in discharge from CSO locations.	X		X
Conservation commission and local conservation districts provide outreach and technical assistance to landowners, conservation planning, and implementation of BMPs.	X		X
An existing memorandum of understanding (MOU) between the State and the cruise ship industry bans discharge into Puget Sound except for vessels with advanced wastewater treatment systems (AWTS).	X		
State, local, and tribal water cleanup plans (including TMDLs) and implementation programs, watershed management plans, shellfish closure response strategies, and other plans or planning processes address restoration of water quality.	X		X

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Current Programs/Regulations: Which Threats Are Not Addressed & Why?

The existing regulations and management programs are targeted at specific projects/ actions, chemicals, practices and/or geographic areas, and do not encompass all potential sources of similar threat or all potential threats. Most of these regulations and programs address the threat once it is present, or at the discharge point into Puget Sound, rather than in a preemptive, preventive manner.

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Threats Not Fully Addressed	Chemical Toxic Threat	Biotoxin Threat	Pathogen Threat
Stormwater permit holders are not required to meet water quality standards for pathogens and toxics.	X		X
Not all chemicals present in wastewater are either monitored or addressed by NPDES permits.	X		
Not all contaminated sites have been cleaned by CERCLA or MTCA.	X		
Some “emerging” chemical contaminants and pathogens, which are known to be present in the environment and for which little information is known about exposure and toxicity, are not being addressed by existing programs.	X		X
PBTs that are not currently included in the list of chemicals identified in Ecology’s PBT regulations are not being addressed by existing programs.	X		
Although all commercial shellfish areas and most major recreational beaches are regularly tested for biotoxins and pathogens, some beaches are not included in existing programs. In addition, monitoring covers only a portion of Puget Sound shoreline areas.			X
The state’s current use of a default assumed fish consumption rate of 17.5 grams per day to establish water quality criteria is not protective for frequent fish consumers.	X		

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Threats Not Fully Addressed	Chemical Toxic Threat	Biotoxin Threat	Pathogen Threat
Risk management assumptions that are inherent in the regulations and management programs, such as the prescribed cleanup levels for an MTCA site, may not coincide with actual exposure that currently exists, Native American treaty-reserved rights to harvest, or the desired uses.	X		
Programs designed to educate and protect the public against these threats are not adequate to reach and inform all members of the public.	X	X	X
Discharge of untreated and limited-treatment sewage waste from smaller aquatic vessels is not being addressed by an existing program.			X
Discharges of sewage to Puget Sound directly and from failing and older on-site sewage systems are not being corrected comprehensively.			X
Discharges from most municipal sewage systems do not remove all contaminants, including nutrients.	X		

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Current Programs/Regulations: ***What types of plans or programs are being used in other locations to address threats to human health from water, sediments, and biota, and what is their documented effectiveness?***

- ***Pathogens*** Several programs are in place on the U.S. coasts to prevent and reduce contamination from boat sewage. These programs include, for example, bans on discharging untreated sewage from boats, requirements to use shore pumping stations or sewage boats, no-discharge zones, requirements for marinas to have sewage pumpout facilities, and boater education. Avalon Harbor on Santa Catalina Island, off the Coast of California, has instituted a mandatory policy of placing dye tablets in holding tanks of all vessels entering the harbor. If dye is detected in the water around any vessel, a stiff penalty is imposed for the first offense, and the boat is barred from mooring in the harbor for any subsequent offense. The effectiveness of these programs has not been documented.

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Current Programs/Regulations: *What types of plans or programs are being used in other locations to address threats to human health from water, sediments, and biota, and what is their documented effectiveness?* *Cont'd*

- ***Toxics*** A new European Community Regulation, referred to as the Registration, Evaluation, Authorization and Restriction of Chemical Substances (REACH), was established in 2007. This regulation requires that manufacturers and importers of chemical substances gather information about the properties of these substances to ensure their safe handling and register the information in a central database maintained by the European Chemical Agency. The agency will coordinate in-depth evaluation of chemicals that present a potential threat and maintain a public database for consumers and professionals to provide information on these chemicals. The regulation also calls for the progressive substitution of the most dangerous chemicals when suitable alternatives have been identified. The effectiveness of these regulations is also unknown.